

# **REQUEST FOR PROPOSALS**

## **Truck Facility Access Design Guidelines**

### **PROBLEM STATEMENT**

Truck stops often locate adjacent to Interstate highways. Poorly designed access to these facilities can result in congestion and unsafe operation in the interchange area. The Louisiana Statewide Transportation Plan recommended that access design guidelines be developed for truck stops accessing interstate highways through interchanges.

### **RESEARCH OBJECTIVES**

The research objectives of this study are to:

1. Inventory truck stops adjoining interstates in Louisiana, and record current access design and truck stop layouts
2. Identify existing access design standards / guidelines in other states
3. Record good and bad practice in truck facility access design
4. Evaluate current practice and recommend preferred guidelines
5. Document recommended guidelines

### **SCOPE**

The research is restricted to development of design guidelines for access to and from truck facilities adjoining interstate highways in Louisiana and accessed by means of an interchange.

### **RESEARCH APPROACH**

#### **Task 1: Literature and Practice Review**

Perform a literature review of current truck facility access design standards / guidelines in the nation. Also establish current practice by communicating with practitioners involved in the design of access facilities to truck stops adjoining interstate highways.

Communication can be by formal survey through mail and/or telephone and/or internet, or by informal data gathering by means of e-mail listservs, blogs, wikis or other internet media.

#### **Task 2: Inventory existing truck stops adjoining interstate highways in Louisiana**

Identify existing truck stops that access adjoining interstate highways through interchanges in Louisiana and document the access design and truck stop layouts at these locations. The layout and designs must be accurately recorded so that they can be compared to existing design guidelines to be determined in task 3.

#### **Task 3: Identify existing truck facility access design standards / guidelines**

From the literature and practice review conducted in task 1, identify existing truck facility access design standards / guidelines. Special attention should be given to agencies that typically offer geometric standards such as the Transportation Research Board, the American Association of State Highway and Transportation Officials, and the Institute of Transportation Engineers.

**Task 4: Establish good and bad practice**

Using professional judgment and information gathered during tasks 1, 2, and 3, document good and bad practice in truck facility access design. Where possible, identify crash reduction factors associated with moving from bad to good designs. Identify good practices based on traffic volume ranges.

**Task 5: Evaluate existing designs in Louisiana**

Conduct an evaluation on the alternative designs identified in this study including, but not limited to, assessments of safety, flow, delay, and compliance with access design guidelines identified in task 3.

**Task 6: Compile recommended guidelines of truck facility access design**

Using the evaluation in task 5, existing guidelines, and recommendations of the Project Review Committee, compile recommended guidelines of truck facility access design for use in Louisiana.

**Task 7: Prepare Progress and Final Reports**

Progress will be reported to the Project Review Committee (PRC) at the end of each task or at the discretion of the PRC. Progress will be reported in writing but may also be by audio-visual presentation if requested by the PRC. A final report must be submitted to LTRC three months before the end of the project. The research results must be presented in an audio-visual presentation to the PRC before the end of the project

**SPECIAL NOTES**

- A. Task descriptions are intended to provide a framework for conducting the research. LTRC is seeking the insight of proposers on how best to achieve the research objectives. Proposers are expected to describe research plans that can realistically be accomplished within the constraints of available funds and contract time. Proposals must present the candidate’s current thinking in sufficient detail to demonstrate their understanding of the problem and the soundness of their approach.
- B. The proposal shall include travel to LTRC as necessary to meet with the Project Review Committee and statewide for conduct of the research. Out of state travel for the conduct of the research shall be identified in the proposal. Funding shall not be included for travel to conferences for presentation of results. Principal Investigators may request support for conference travel funding outside the project budget.
- C. LTRC projects are intended to produce results that will be applied in practice. It is to be expected that an implementation plan for moving the results of the research into practice will evolve as a concerted effort during this project. The final report must contain an implementation plan to include as a minimum, the following:
  - a. The “product” expected from the research;
  - b. A realistic assessment of impediments to successful implementation;
  - c. The activities necessary for successful implementation;
  - d. The criteria for judging the progress and consequences of implementation.
- D. To assist in the implementation process, the investigators of this research shall be prepared to present the final results to LaDOTD officials in an oral presentation to be held in Baton Rouge LaDOTD Headquarters after acceptance of the final report.

**CONTRACT TIME**

24 months

**COST**

\$100,000

**AUTHORIZATION TO BEGIN WORK**

October 15, 2010 (estimated)

**PROPOSAL FORMAT**

All proposals must be formatted according to LTRC Research Manual, 2003 edition

([http://www.ltrc.lsu.edu/pdf/research\\_man03.pdf](http://www.ltrc.lsu.edu/pdf/research_man03.pdf)).

**PROPOSAL SELECTION**

The Project Review Committee selected for this project will review, evaluate and rank all proposals received according to the criteria listed in the proposal review form shown in figure 2-6 in the LTRC Research Manual

**DEADLINE FOR RECEIPT OF PROPOSAL**

September 24, 2010, 4.30 p.m.

**SUBMISSION OF PROPOSAL**

An electronic copy of the proposal must be submitted to:

Mr. Harold R. Paul, P.E.

Director

Louisiana Transportation Research Center

4101 Gourrier Ave.

Baton Rouge, LA 70808

Tel: (225) 767 9131, e-mail: [Harold.Paul@la.gov](mailto:Harold.Paul@la.gov)

**CONTACT PERSON**

Chester G. Wilmot, P.E., Ph.D.

Department of Civil and Environmental Engineering and

Louisiana Transportation Research Center

Louisiana State University

Baton Rouge, LA 70803

tel: (225) 578 4697, e-mail: [cecgw@lsu.edu](mailto:cecgw@lsu.edu)